

Appendix 1: Proposed framework for community-engaged system dynamics practice

<p>Project: Generally refers to a finite process to convene a stakeholder group to explore a specific problem. A project may consist of multiple sessions.</p>		
<p>Design Decisions: Problem scoping (such as determining the reference mode, problem type, depth of insight and value add of modeling); stakeholder identification; determining modeling objectives; and core modeling team formation</p>	<p>Assessment Approaches: Impact evaluation, experiments, participant surveys</p>	<p>Significance: Project level design decisions affect overall project impact such as whether the right problem is being modeled, the relevant stakeholders engaged, fit of approach to community, problem, and scope</p>
<p>Session: a fixed period of time to engage stakeholders using scripts.</p>		
<p>Design Decisions: number, length, and frequency of sessions; virtual or in-person format of engagement; and stakeholder participation (such as convening a subset of stakeholders or all stakeholders involved in the project in a given session)</p>	<p>Assessment approaches: Structured debriefs, process evaluations, artifact reviews</p>	<p>Significance: Session level design decisions affect dynamics of participant engagement and the core modeling team's ability to process outputs during and across sessions</p>
<p>Script: a documented, structured small group exercise to engage stakeholders in modeling.</p>		
<p>Design Decisions: Selecting and sequencing of activities; adapting the structure of activities; determining facilitation roles</p>	<p>Assessment approaches: Comparative script testing, fidelity checklists, video process recordings</p>	<p>Significance: Script level design decisions affect the outputs of activities by varying the inputs; stakeholder engagement in activities; and dynamics between participants and facilitators</p>
<p>Sub-Script: Components (or units) within scripts that are not explicitly stated in scripts but can be further tailored or adapted to enhance facilitation</p>		
<p>Design Decisions: phrasing activity prompts; structure of stakeholder participation; and use of illustrative examples</p>	<p>Assessment approaches: sub-script testing</p>	<p>Significance: Sub-script level design decisions affect the content of activity outputs; stakeholder engagement with one another and activity outputs; and stakeholder understanding of activity structure and underlying foundations of system dynamics</p>